INHALT – CONTENTS – SOMMAIRE

Zusammenfassender Bericht

Review Article · Compte rendu

	Seite *Page*	Nr. *Issue*
Naghdi, P.M.: A critical review of the state of finite plasticity	315	3

ORIGINALARBEITEN

Original Papers · Articles originaux

Amberg, G.: Visualization of boundary layers in a sectioned centrifuge	270	2
Ash, E., Eaton, B., and Gustafson, K.: Counting the number of solutions in combustion and reactive flow problems	558	4
Awrejcewicz, J., and Reinhardt, W.-D.: Quasiperiodicity, strange non-chaotic and chaotic attractors in a forced two degrees-of-freedom system	713	5
Axelrad, D.R.: Stochastic transport theory for porous media	157	2
Bampi, F., and Zordan, C.: Higher order shock waves	12	1
Baruch, M.: Shape distortion of space structures, postulates and controversy	51	1
Boffi, V.C., and Rossani, A.: On the Boltzmann system for a mixture of reacting gases	254	2
Breuer, S., and Roseman, J.J.: Spatial decay theorems for nonlinear parabolic equations in semi-infinite cylinders	524	4
Brinkman, G.J., and Valkering, T.P.: Soliton decay in a Toda chain caused by dissipation	61	1
Capodanno, P.: Sur un mouvement particulier d'un profil muni d'une cavité fermée par un couvercle élastique et remplie de liquide	537	4
Celletti, A.: Analysis of resonances in the spin-orbit problem in Celestial Mechanics: The synchronous resonance (Part I)	174	2
Celletti, A.: Analysis of resonances in the spin-orbit problem in Celestial Mechanics: Higher order resonances and some numerical experiments (Part II)	453	4
Chipot, M., and Sideris, T.: On the Abelian Higgs model	105	1
Curró, C.: Wave features of a hodograph-like transformation for quasilinear hyperbolic systems	38	1
Davi, F., and Gurtin, M.E.: On the motion of a phase interface by surface diffusion	782	6
DeLillo, T. K., Elcrat, A. R., and Miller, K.G.: Constant vorticity Riabouchinsky flows from a variational principle	755	6
Deuring, P.: The Stokes-system in exterior domains: L^p-estimates for small values of a resolvent parameter	829	6
Elhefnawy, A.F.: Nonlinear Marangoni instability in dielectric superposed fluids	669	5
Fassò, F.: Lie series for vector and hamiltonian perturbation method theory	843	6
Frankel, I.: Compressible flow induced by the transient motion of a wavemaker	628	5
Georgiadis, H. G., and Papadopoulos, G. A.: Elastostatics of the orthotropic double-cantilever-beam fracture specimen	889	6
Groesen, E. van, Beckum, F.P.H. van, and Valkering, T.P.: Decay of travelling waves in dissipative Poisson systems	501	4
Gundersen, R. M.: Oblique magnetohydrodynamic shock wave decay	745	6

	Seite *Page*	Nr. *Issue*
Jacobs, S.J.: On the equations of mathematical hydraulics	579	4
Kalitzova-Kurteva, P.G., and Zapryanov, Z.D.: Boundary layer growth on two spheres	20	1
Klein, R., and Ting, L.: Far field velocity potential induced by a rapidly decaying vorticity distribution	395	3
Klepp, H. J.: Über den Einfluss reibungsbehafteter Bindungen auf den kinetischen Zustand von Mehrkörpersystemen	875	6
Kwong, M.K.: On the Kolodner-Coffman method for the uniqueness problem of Emden-Fowler BVP	79	1
Lim, C.C.: Existence of KAM tori in the phase-space of lattice vortex systems	227	2
Loyalka, S.K., and Hickey, K.A.: The Kramers problem: Velocity slip and defect for a hard sphere gas with arbitrary accommodation	245	2
Nagata, W.: Convection in a layer with sidewalls: Bifurcation with reflection symmetries	812	6
Ostoja-Starzewski, M.: A generalization of thermodynamic orthogonality to random media	701	5
Pak, R.Y.S., and Gobert, A.T.: On the axisymmetric interaction of a rigid diesc with a semi-infinite solid	684	5
Phan-Thien, N.: Sliding and squeezing flow of a viscoelastic fluid in a wedge	431	3
Plum, M.: Eigenvalue inclusions for second-order ordinary differential operators by a numerical homotopy method	205	2
Power, H., and Villegas, M.: Viscous-inviscid model for the linear stability of core-annular flow	1	1
Saasen, A., and Tyvand, P.A.: Rayleigh-Taylor instability and Rayleigh-type waves on a Maxwell-fluid	284	2
Sari, N., and Schmitt, B.V.: Oscillations lentement forcés du pendule simple	480	4
Schwendeman, D.W.: Nonlinear diffusion of impurities in semiconductors	607	5
Selvadurai, A. P. S.: Hertzian contact in the presence of a Mindlin Force	865	6
Sofonea, M.: Some remarks on the behaviour of the solution in dynamic processes for rate-type models	656	5
Temme, N.M.: Asymptotic estimates for Laguerre polynomials	114	1
Wang, C. Y.: Nonlinear deformations of a slender rod rotated at one end	900	6

KURZE MITTEILUNGEN

Brief Reports · Communications brèves

Ahmad, N., Patel, G.S., and Sidappa, B.: Visco-elastic boundary layer flow past a stretching plate and heat transfer	294	2
Avinyó, A., and Mora, X.: Lower bounds of Cheeger-Osserman type for the first eigenvalue of the n-dimensional fixed membrane problem	426	3
Bazley, N., Jiménez, R., Mennickent, H., and Miletta, P.: Bifurcation of special periodic solutions to delay-differential equations	127	1
Carmesin, H.-O.: Generalization of Bessel and hypergeometric functions	299	2
Elbert, A., and Laforgia, A.: A convexity property of zeros of Bessel functions	734	5
Payton, R. G.: Transient stresses in a transversely isotropic elastic solid caused by a moving dislocation whose path may intersect a lacuna	913	6
Phan-Thien, N., and Zheng, R.: Viscoelastic flow in a curved channel: A similarity solution for the Oldroyd B fluid	766	6
Ramkissoon, H.: Visco-elastic flow past a spheroid	137	1
Ramkissoon, H., and Majumdar, S.R.: Flow due to the longitudinal and torsional oscillation of a cylinder	598	4

	Seite *Page*	Nr. *Issue*
Renardy, M.: Corner singularities between free surfaces and open boundaries	419	3
Rogers, R.C.: On a linear model of mechanical phase transitions	728	5
Rösel, R.: Die Beziehung zwischen Fusspunktkurve und Krümmungsmittelpunkt	447	3
Singh, K. D.: Hydromagnetic effects on the three-dimensional flow past a porousplate	441	3
Sotomayor, J.: Inversion of smooth mappings	306	2
Stewart, I. W.: On the coagulation-fragmentation equation	917	6

VARIA

Miscellaneous · Divers

Bevorstehende internationale Tagungen – List of forthcoming international meetings-Prochaines conférences internationales	146	1
	311	2
	450	3
	604	4
	925	6

BUCHBESPRECHUNGEN

Book Reviews · Notices bibliographiques

	Seite *Page*	Nr. *Issue*
Abramyan, E. A.: Industrial Electron Accelerator and their Applications (Springer-Verlag, Berlin 1988) (R. Eichler)	156	1
Bahri, A.: Critical Points at Infinity in Some Variational Problems (Longman, Harlow 1989) (M. Struwe)	153	1
Beltzer, A. I.: Variational and Finite Element Methods (Springer-Verlag, Berlin-Heidelberg 1990) (R. Haas)	931	6
Benilan, P., M. Chipot, L. C. Evans and M. Pierre (eds.): Recent Advances in Nonlinear Elliptic and Parabolic Problems (Longman, Harlow 1989) (M. Chipot)	606	4
Binder, K. and D. W. Heermann: Monte Carlo Simulation in Statistical Physics (Springer-Verlag, Berlin 1988) (R. Aebi)	155	1
Bishop, A. R., D. K. Campbell and S. Pnevmatikos (eds.): Disorder and Nonlinearity (Springer-Verlag, Berlin 1989) (H. Troger)	931	6
Boffi, V. and H. Neunzert (eds.): Application of Mathematics in Industry and Technology (Teubner, Stuttgart 1989) (M. Renardy)	155	1
Bressoud, D. M.: Factorization and Primality Testing (Springer-Verlag, Berlin 1989) (P. Thurnheer)	929	6
Böning, K.: Basic Numerical Modules in Fortran for IBM PC and Compatibles (Vieweg, Braunschweig 1988) (H. R. Schwarz)	151	1
Caflisch, R. E.: Mathematical Aspects of Vortex Dynamics (SIAM Philadelphia 1989) (C. J. Amick)	155	1
Cebeci, T.: Solution Manual and Computer Programs for Physical and Computational Aspects of Convective Heat Transfer by T. Cebeci and P. Bradshaw (Springer-Verlag, Berlin 1988) (A. Bottaro)	314	2

	Seite *Page*	Nr. *Issue*
Chien, W. and Z. Fu (eds.): The Advances of Applied Mathematics and Mechanics in China (China Academic Publ., Beijing 1987) (M. Renardy)	606	4
Ciarlet, Ph. G.: Introduction to Numerical Linear Algebra and Optimization (Cambridge University Press 1989) (H. R. Schwarz)	738	5
Constanda, C.: A Mathematical Analysis of Bending of Plates with Transverse Shear Deformation (Longman, Harlow 1990) (A. Mielke)	929	6
Constantin, P., C. Foias, B. Nicolaenko and R. Teman: Integral Manifolds and Inertial Manifolds for Dissipative Partial Differential Equations (Springer-Verlag, Berlin 1988) (J. Scheurle)	154	1
Costabel, P. and J. Pfeiffer (eds.): Der Briefwechsel von Johann I Bernoulli, Band 2 (Birkhäuser Verlag, Basel/Boston/Berlin 1988) (K. Reich)	452	3
Dacorogna, B.: Direct Methods in the Calculus of Variations (Springer-Verlag, Berlin 1989) (M. Fuchs)	739	5
Dafermos, C. M., G. Ladas and G. Papanicolaou (eds.): Differential Equations (Marcel Dekker, New York 1989) (B. Ruf)	743	5
Dario, P. (ed.): Sensors and Sensory Systems for Advanced Robots. (Springer-Verlag, Berlin-Heidelberg 1988) (G. Schweitzer)	149	1
Dieudonné, J.: A History of Algebraic and Differential Topology 1900 - 1960 (Birkhäuser Verlag, Basel/Boston/Berlin 1989) (B. Eckmann)	151	1
Dunwoody, J.: Elements of Stability of Viscoelastic Fluids (Longman, Harlow 1989) (M. Renardy)	930	6
Erdös, P., P. M. Gruber and J. Hammer: Lattice Points (Longman, Harlow 1989) (E. Bayer-Flückiger)	154	1
Figueiredo, D. G. de: Lectures on the Ekeland Variational Principle with Applications and Detours (Springer-Verlag, Berlin 1989) (B. Ruf)	739	5
Friedman, A.: Mathematics in Industrial Problems (Springer-Verlag, New York 1988) (H.-G. Stark)	149	1
Gamkrelidze, R. V. (ed.): Analysis I (Springer-Verlag, Berlin 1989) (C. Bandle)	928	6
Grasman, J.: Asymptotic Methods for Relaxation Oscillations (Springer-Verlag, Berlin-New York 1987) (K. Nipp)	314	2
Grimmett, G.: Percolation (Springer-Verlag, Berlin 1989) (N. Straumann)	606	4
Guicciardini, N.: The Development of Newtonian Calculus in Britain, 1700–1800 (Cambridge University Press 1989) (K. Hutter)	738	5
Hasse, W.: Optische Beobachtungen in gekrümmten Räumen (Verlag Universitätsbibliothek, Technische Universität 1987) (N. Straumann)	152	1
Helson, H., B. Sz.-Nagy and F.-H. Vasilescu (eds.): Linear Operators in Function Spaces, Operator Theory: Advances and Applications (Birkhäuser Verlag, Basel/Boston/Berlin 1989) (B. Ruf)	740	5
IAEA: Fusion Reactor Design and Technology 1986. Proceedings of the 4th Technical Committee Meeting and Workshop on Fusion Reactor Design and Technology (F. Rau)	150	1
Klingbeil, E.: Variationsrechnung (BI-Wissenschaftsverlag, Mannheim-Wien-Zürich, 2. Aufl., 1988) (M. Struwe)	153	1
Klingenberg, W.: Lineare Algebra und Geometrie, 2., ergänzte Aufl. (Springer-Verlag, Berlin 1989) (H. R. Schneebeli)	932	6
Kostrikin, A. I. and I. R. Shafarewich: Algebra I. (Springer-Verlag, Heidelberg-Berlin 1990) (H. R. Schneebeli)	929	6
Kostrikin, A. I. and Yu. I. Manin: Linear Algebra and Geometry (Gordon & Breach, New York 1989) (H. R. Schneebeli)	931	6
Krasnosel'skii, M. A. and A. V. Pokrovskii: Systems with Hysteresis (Springer-Verlag, Berlin 1989) (J. Sprekels)	605	4
Levin, S. A., T. G. Hallam and L. J. Gross (eds.): Aplied Mathematical Ecology (Springer-Verlag, Berlin 1989) (R. Sperb)	742	5
Marsal, D.: Finite Differenzen und Elemente. Numerische Lösungen von Variationsproblemen und partiellen Differentialgleichungen (Springer-Verlag, Berlin 1988) (H. R. Schwarz)	154	1

	Seite *Page*	Nr. *Issue*
Mercier, B.: An Introduction to the Numerical Analysis of Spectral Methods (Springer-Verlag, Berlin 1989) (H. R. Schwarz)	606	4
Milojevic, P. S. (ed.): Nonlinear Functional Analysis (Marcel Dekker, New York 1990) (B. Ruf)	741	5
Mittelmann H. D. and D. Roose (eds.) Continuation Techniques and Bifurcation Problems (Birkhäuser Verlag, Basel/Boston/Berlin 1990) (R. Seydel)	741	5
Molino, P.: Riemannian Foliations (Birkhäuser Verlag, Basel/Berlin/Boston 1987) (V. Bangert)	151	1
Neunzert, H. (ed.): Road-Vehicle-Systems and Related Mathematics (B. G. Teubner, Stuttgart/Kluwer Academic Publ., Amsterdam 1989) (W. Schiehlen)	313	2
Olver, P. J.: Applications of Lie Groups to Differential Equations (Springer-Verlag, Berlin 1986) (F. Spirig)	152	1
Peitgen, H.-O. and D. Saupe (eds.): The Science of Fractal Images (Springer-Verlag, Berlin 1988) (J. Denzler)	313	2
Robert, A.: Advanced Calculus for Users (North Holland, Amsterdam 1989) (H. R. Schneebeli)	148	1
Rotman, J. J.: An Introduction to Algebraic Topology (Springer-Verlag, Berlin 1988) (M. Huber)	930	6
Seeger, K. H.: Semiconductor Physics, 4th ed. (Springer-Verlag, Berlin 1989) (H. U. Schwarzenbach)	605	4
Sewell, J.: Maximum and Minimum Principles (Cambridge University Press 1987) (R. Sperb)	152	1
Siegmann, A. E.: Lasers (University Science Book, Mill Valley/Oxford University Press 1986) (G. Josten)	156	1
Sinai, Ya. G. (ed.): Dynamical Systems II. Ergodic Theory with Applications to Dynamical Systems and Statistical Mechanics (Springer-Verlag, Berlin 1989) (H. Crauel)	740	5
Strayer, J. K.: Linear Programming and its Application (Springer-Verlag, Berlin 1989) (S. Zumsteg)	742	5
Tsay, Y. T., L.-S. Shieh and S. Barnett: Structural Analysis and Design of Multivariable Control Systems: An Algebraic Approach (Springer-Verlag, Berlin 1988) (C. Heij)	156	1
Törnig, W. and P. Spellucci: Numerische Mathematik für Ingenieure und Physiker, Band 2: Numerische Methoden der Analysis (Springer-Verlag, Berlin 1990) (H. R. Schwarz)	741	5
Ulrich, C., J. Wolff von Gudenberg (eds.): Research Reports ESPRIT, Project 1072 DIAMOND Vol. 1: Accurate Numerical Algorithms (Springer-Verlag, Berlin 1989) (H. Ungricht)	605	4
Vitushkin, A. G. (ed.): Several complex variables, I. (Springer-Verlag, Berlin 1990) (N. Kerzman)	932	6
Werra, D. de: Eléments de programmation linéaire avec application aux graphes (Presses polytechniques romandes, Lausanne 1989) (S. Zumsteg)	742	5
Whiteside, D. T.: The preliminary manuscripts for Isaac Newton's 1987 Principia 1684–1685 (Cambridge University Press 1989) (K. Hutter)	743	5
Willem, J. M.-M.: Critical Point Theory and Hamiltonian Systems (Springer-Verlag, Berlin-New York 1989) (M. Struwe)	150	1
Zhu, Y., X. Zhong, B. Chen and Z. Zhang: Difference Methods for Initial-Boundary-Value Problems and Flow Around Bodies (Science Press, Beijing/Springer-Verlag, Berlin 1988) (H. R. Schwarz)	314	2
Ziemer, W. P.: Weakly Differentiable Functions (Springer-Verlag, Berlin 1989) (M. Struwe)	928	6

AUTORENREGISTER

Index of authors · Table des auteurs

Ahmad, N., Patel, G.S., and *Sidappa, B.*, 294
Amberg, G., 270
Ash, E., Eaton, B., and *Gustafson, K.*, 558
Avinyó, A., and *Mora, X.*, 426
Awrejcewicz, J., and *Reinhardt, W.-D.*, 713
Axelrad, D.R., 157

Bampi, F., and *Zordan, C.*, 12
Baruch, M., 51
Bazley, N., Jiménez, R., Mennickent, H., and *Miletta, P.*, 127
Beckum, F.P.H. van, see *Groesen, E. van*, 501
Boffi, V.C., and *Rossani, A.*, 254
Breuer, S., and *Roseman, J.J.*, 524
Brinkman, G.J., and *Valkering, T. P.*, 61

Capodanno, P., 537
Carmesin, H.-O., 299
Celletti, A., 174
Celletti, A., 453
Chipot, M., and *Sideris, T.*, 105
Currò, C., 38

Davi, F., and *Gurtin, M. E.*, 782
DeLillo, T. K., Elcrat, A. R., and *Miller, K. G.*, 755
Deuring, P., 829

Eaton, B., see *Ash, E.*, 558
Elbert, A., and *Laforgia, A.*, 734
Elcrat, A. R., see *DeLillo, T. K.*, 755
Elhefnawy, A.F., 669

Fassò, F., 843
Frankel, I., 628

Georgiadis, H. G., and *Papadopoulos, G. A.*, 889
Gobert, A.T., see *Pak, R.Y.S.*, 684
Groesen, E. van, Beckum, F.P.H. van, and *Valkering, T.P.*, 501
Gundersen, R. M., 745
Gurtin, M. E., see *Davi, F.*, 782
Gustafson, K., see *Ash, E.*, 558

Hickey, K.A., see *Loyalka, S.K.*, 245

Jacobs, S.J., 579
Jiménez, R., see *Bazley, N.*, 127

Kalitzova-Kurteva, P.G., and *Zapryanov, Z.D.*, 20
Klein, R., and *Ting, L.*, 395
Klepp, H. J., 875
Kwong, M. K.

Laforgia, A., see *Elbert, A.*, 734
Lim, C.C., 227
Loyalka, S.K., and *Hickey, K.A.*, 245

Majumdar, S.R., see *Ramkissoon, H.*, 598
Mennickent, H., see *Bazley, N.*, 127
Miletta, P., see *Bazley, N.*, 127
Miller, K. G., see *DeLillo, T. K.*, 755
Mora, X., see *Avinyó, A.*, 426

Nagata, W., 812
Naghdi, P.M., 315

Ostoja-Starzewski, M., 701

Pak, R.Y.S., and *Gobert, A.T.*, 684
Papadopoulos, G. A., see *Georgiadis, H. G.*, 889
Patel, G.S., see *Ahmad, N.*, 294
Payton, R. G., 913
Phan-Thien, N., and *Zheng, R.*, 766
Phan-Thien, N., 431
Plum, M., 205
Power, H., and *Villegas, M.*, 1

Ramkissoon, H., 137
Ramkissoon, H., and *Majumdar, S.R.*, 598
Reinhardt, W.-D., see *Awrejcewicz, J.*, 713
Renardy, M., 419
Rogers, R.C., 728
Roseman, J.J., see *Breuer, S.*, 524
Rossani, A., see *Boffi, V.C.*, 254
Rösel, R., 447

Saasen, A., and *Tyvand, P.A.*, 284
Sari, N., and *Schmitt, B.V.*, 480
Schmitt, B.V., see *Sari, N.*, 480
Schwendeman, D.W., 607
Selvadurai, A. P. S., 865
Sidappa, B., see *Ahmad, N.*, 294
Sideris, T., see *Chipot, M.*, 105
Singh, K. D., 441
Sofonea, M., 656

Sotomayor, J., 306
Stewart, I. W., 917

Temme, N.M., 114
Ting, L., see *Klein, R.*, 395
Tyvand, P.A., see *Saasen, A.*, 284

Valkering, T. P., see *Brinkman, G.J.*, 61
Valkering, T.P., see *Groesen, E. van*, 501
Villegas, M., see *Power, H.*, 1

Wang, C. Y., 900

Zapryanov, Z. D., see *Kalitzova-Kurteva, P.G.*, 20
Zheng, R., see *Phan-Thien, N.*, 766
Zordan, C., see *Bampi, F.*, 12

Fasc. 1 (January 1990) pag. 1–156
Fasc. 2 (March 1990) pag. 157–314
Fasc. 3 (May 1990) pag. 315–452
Fasc. 4 (July 1990) pag. 453–606
Fasc. 5 (September 1990) pag. 607–743
Fasc. 6 (November 1990) pag. 745–932

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically those of translation, reprinting, re-use of illustrations broadcasting, reproductions by photocopying machine or similar means, and storage in data banks.

© Birkhäuser Verlag, CH-4010 Basel, Switzerland, 1990
ISSN 0044-2275